

# WPDES PERMIT

# STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE

#### Sartori Company-West Main Building

**ELIMINATION SYSTEM** 

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at

12 W. Main St, Plymouth, WI

to

# Mullet River (Mullet River Watershed, Sheboygan River Basin) in Sheboygan County

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

•	n Hartsook
Was	tewater Field Supervisor

PERMIT TERM: EFFECTIVE DATE - June 01, 2019 EXPIRATION DATE - May 31, 2024

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# **1 Surface Water Requirements**

# 1.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation						
Sampling	mpling   Sampling Point Location, WasteType/Sample Contents and Treatment Description (as					
Point	applicable)					
Number						
001	EFFLUENT: Noncontact cooling water (excluding boiler blowdown and bleed off), reverse					
	osmosis polisher water and uncontaminated elevator pit water. Flow measurements shall be taken					
	with a flow meter located in the cream compressor room. Effluent samples shall be collected from					
	the manhole on the east side of the building, at the combined flow sampling station, with a portable					
	24-hr flow proportional composite sampler prior to discharge to the Mullet River.					

# 1.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

# 1.2.1 Sampling Point (Outfall) 001 - EFFLUENT

Monitoring Requirements and Effluent Limitations						
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes	
Flow Rate		MGD	Daily	Continuous		
BOD <sub>5</sub> , Total	Daily Max	20 mg/L	Monthly	24-Hr Flow Prop Comp		
BOD <sub>5</sub> , Total	Monthly Avg	10 mg/L	Monthly	24-Hr Flow Prop Comp		
Suspended Solids, Total		mg/L	Monthly	24-Hr Flow Prop Comp		
pH Field	Daily Max	9.0 su	Monthly	Grab		
pH Field	Daily Min	6.0 su	Monthly	Grab		
Chlorine, Total Residual	Daily Max	38 μg/L	Monthly	Grab	Limit goes into effect January 01, 2022. See section 1.2.1.1 and schedule 3.1.	
Chlorine, Total Residual	Monthly Avg	38 μg/L	Monthly	Grab	Limit goes into effect January 01, 2022. See section 1.2.1.1 and schedule 3.1.	
Phosphorus, Total	Monthly Avg	0.8 mg/L	Monthly	24-Hr Flow Prop Comp	Interim limit in effect through March 31, 2023. See phosphorus sections and schedule section 3.2.	

Monitoring Requirements and Effluent Limitations						
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes	
Phosphorus, Total	Monthly Avg	0.225 mg/L	Monthly	24-Hr Flow Prop Comp	Final limit goes into effect April 01, 2023. See phosphorus sections and schedule section 3.2.	
Phosphorus, Total	6-Month Avg	0.075 mg/L	Monthly	24-Hr Flow Prop Comp	Final limit goes into effect April 01, 2023. See phosphorus sections and schedule section 3.2.	
Phosphorus, Total	6-Month Avg	0.094 lbs/day	Monthly	Calculated	Final limit goes into effect April 01, 2023. See phosphorus sections and schedule section 3.2.	
Temperature Maximum		deg F	Monthly	Continuous	Monitoring only. See section 1.2.1.2.	
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	Two WET tests shall occur in rotating quarters during the permit term. See section 1.2.1.6.	

#### 1.2.1.1 Potential Removal of Effluent Limitation(s)

The effluent limitations for total residual chlorine become effective on January 1, 2022 as specified in the Schedules Section. Monthly monitoring is required upon permit reissuance.

However, when 11 or more representative results for total residual chlorine have been provided to the Department, the permittee may request that the Department make a determination of the need for a limit under section NR 106.05, Wisconsin Administrative Code. For this request, the samples shall be evenly spaced over the period or periods of discharge during at least 12 months time and must be tested according to the "Sampling and Testing Procedures" in the Standard Requirements section in this permit. Within 60 days of such request, the Department shall make that determination. If the Department determines that effluent limitations are unnecessary based on the procedures in NR 106.05, the Department shall notify the permittee that the limitations will not become effective, pursuant to NR106.04(4). The monitoring requirements for total residual chlorine may be reduced and the compliance schedule shall be discontinued. A permit modification is required to implement these changes.

If, after reviewing the data, the Department determines that effluent limitations for total residual chlorine are necessary based on the procedures in NR 106.05, the requirement to meet the effluent limitations according to Schedule 3.1 will not be removed nor will the monitoring frequency be reduced.

#### 1.2.1.2 Effluent Temperature Monitoring

For manually measuring effluent temperature, grab samples should be collected at 6 evenly spaced intervals during the 24-hour period. Alternative sampling intervals may be approved if the permittee can show that the maximum effluent temperature is captured during the sampling interval. For monitoring temperature continuously, collect measurements in accordance with s. NR 218.04(13). This means that discrete measurements shall be recorded at intervals of not more than 15 minutes during the 24-hour period. In either case, report the maximum temperature measured during the day on the DMR.

#### 1.2.1.3 Phosphorus Water Quality Based Effluent Limitation(s)

The final water quality based effluent limits for phosphorus are a monthly average limit of 0.225 mg/L, and 6-month average limits of 0.075 mg/L and 0.094 lbs/day, which will take effect per the Phosphorus Schedule <u>unless</u>:

- (A) As part of the application for the next reissuance, or prior to filing the application, the permittee submits either: 1.) a watershed adaptive management plan and a completed Watershed Adaptive Management Request Form 3200-139; or 2.) an application for water quality trading; or 3.) an application for a variance; or 4.) new information or additional data that supports a recalculation of the numeric limitation; and
- (B) The Department modifies, revokes and reissues, or reissues the permit to incorporate a revised limitation before the expiration of the compliance schedule\*.

Note: The permittee may also submit an application for a variance within 60 days of this permit reissuance, as noted in the permit cover letter, in accordance with s. 283.15, Stats.

If Adaptive Management or Water Quality Trading is approved as part of the permit application for the next reissuance or as part of an application for a modification or revocation and reissuance, the plan and specifications submittal, construction, and final effective dates for compliance with the total phosphorus WQBEL may change in the reissued or modified permit. In addition, the numeric value of the water quality based effluent limit may change based on new information (e.g. a TMDL) or additional data. If a variance is approved for the next reissuance, interim limits and conditions will be imposed in the reissued permit in accordance with s. 283.15, Stats., and applicable regulations. A permittee may apply for a variance to the phosphorus WQBEL at the next reissuance even if the permittee did not apply for a phosphorus variance as part of this permit reissuance.

Additional Requirements: If a water quality based effluent limit has taken effect in a permit, any increase in the limit is subject to s. NR 102.05(1) and ch. NR 207, Wis. Adm. Code. When a six-month average effluent limit is specified for Total Phosphorus the applicable averaging periods are May through October and November through April.

\*Note: The Department will prioritize reissuances and revocations, modifications, and reissuances of permits to allow permittees the opportunity to implement adaptive management or nutrient trading in a timely and effective manner.

#### 1.2.1.4 Alternative Approaches to Phosphorus WQBEL Compliance

Rather than upgrading its wastewater treatment facility to comply with WQBELs for total phosphorus, the permittee may use Water Quality Trading or the Watershed Adaptive Management Option, to achieve compliance under ch. NR 217, Wis. Adm. Code, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. The permittee may also implement an upgrade to its wastewater treatment facility in combination with Water Quality Trading or the Watershed Adaptive Management Option to achieve compliance, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. If the Final Compliance Alternatives Plan concludes that a variance will be pursued, the Plan shall provide information regarding the basis for the variance.

# 1.2.1.5 Submittal of Permit Application for Next Reissuance and Adaptive Management or Pollutant Trading Plan or Variance Application

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit. If the permittee intends to pursue adaptive management to achieve compliance with the phosphorus water quality based effluent limitation, the permittee shall submit with the application for the next reissuance: a completed Watershed Adaptive Management Request Form 3200-139, the completed Adaptive Management Plan and final plans for any system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the permittee intends to pursue pollutant trading to achieve compliance, the permittee shall submit an application for water quality trading with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading to achieve compliance with the final water quality-based limit, the reissued permit will specify a schedule for the necessary upgrades. If the permittee intends to seek a variance, the permittee shall submit an application for a variance with the application for the next reissuance.

#### 1.2.1.6 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Mullet River, upstream of mixing zone

**Acute Mixing Zone Concentration: N/A** 

**Dilution series:** At least five effluent concentrations and dual controls must be included in each test.

• Acute: 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.

#### **WET Testing Frequency:**

**Acute** tests shall be conducted twice during the permit term in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

• Acute: October 01, 2021- December 31, 2021; April 01, 2023- June 30, 2023.

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in April 01, 2024- June 30, 2024.

**Testing:** WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

**Reporting:** The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2<sup>nd</sup> Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

**Determination of Positive Results:** An acute toxicity test shall be considered positive if the Toxic Unit - Acute ( $TU_a$ ) is greater than 1.0 for either species. The  $TU_a$  shall be calculated as follows:  $TU_a = 100 \div LC_{50}$ .

**Additional Testing Requirements:** Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90 day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

# 2 Land Application Requirements

# 2.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

	Sampling Point Designation					
Sampling	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)					
Point Number						
002	Landspreading of salty whey, process wastewater, concentrated whey not sold as product, and off-spec whey product or milk on sites approved by the Department of Natural Resources, either directly to approved sites or via manure storage structures. A representative sample shall be collected from the hauling vehicle for each waste type that is landspread during the quarter and the test results shall be recorded in the daily log.					

# 2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

#### 2.2.1 Sampling Point (Outfall) 002 - Landspreading Liquid Waste

	Monitoring Requirements and Limitations						
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes		
Solids, Total		% Comp	Quarterly	Grab			
Chloride		mg/L	Quarterly	Grab			
Nitrogen, Total Kjeldahl		mg/L	Quarterly	Grab			
Nitrogen, Organic Total		mg/L	Quarterly	Grab			
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total		mg/L	Quarterly	Grab			
Phosphorus, Total		mg/L	Quarterly	Grab			
Potassium, Total Recoverable		mg/L	Quarterly	Grab			

#### Daily Log - Monitoring Requirements and Limitations

All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.

Parameters	Limit	Units	Sample Frequency	Sample Type
Flow	-	Gallons/Day	Daily	Log
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Ground Conditions	-	Frozen or Unfrozen	Daily	Observe prior to landspreading
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated
Frozen Site Maximum Weekly Loading Volume	6,800	Gal/Acre/Week	Weekly	Calculated
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Weekly Loading Volume	13,500	Gal/Acre/Week	Weekly	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	Calculated
Volume to Manure Pits	See NR214.17(1)	Gallons/Day	Daily	Log
Manure Pit ID Number	-	Number	-	Log

#### **Annual Report – Summary of Monitoring Requirements and Limitations**

The Annual Report is due by January 31<sup>st</sup> of each year for the previous calendar year. See the 'Annual Land Application Report' subsection in Standard Requirements.

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Parameters	Limit	Units	Reporting Frequency	Sample Type			
DNR Site Number(s)	-	Number	-	-			
Acres Land Applied	-	Acres	Annual	-			
Total Volume Per Site	-	Gallons	Annual	Total Annual			
Total Ammonia Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Total Annual			
Total Organic Nitrogen Per Site	-	Pounds/Acre/Year	Annual	Total Annual			
Total Kjeldahl Nitrogen per Site	160	Pounds/Acre/Year	Annual	Calculated			

#### **Annual Report – Summary of Monitoring Requirements and Limitations**

The Annual Report is due by January 31<sup>st</sup> of each year for the previous calendar year. See the 'Annual Land Application Report' subsection in Standard Requirements.

Parameters	Limit	Units	Reporting Frequency	Sample Type
Total Chloride per Site	170 340	Pounds/Acre/Year Pounds/Acre per 2 Years	Annual	Calculated
Total Volume to Manure Pits	-	Gallons	Annual	Total Annual

#### 2.2.1.1 Land Application Management Plan

The facility shall submit a revised land application management plan to the Department for approval 90 days prior to the commencement of land application activities under this permit per Schedule 3.3.

#### 2.2.1.2 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

#### 2.2.1.3 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

#### 2.2.1.4 Discharge to Manure Pit(s)

Pursuant to s. NR 214.17(1), Wisconsin Administrative Code, an exemption may be granted in writing to certain provisions of NR 214 for discharges to manure pits, provided industrial wastes are less than 10 % of the mixture contained in the manure pit at the time it is landspread.

# 3 Schedules

# 3.1 Water Quality Based Effluent Limits (WQBELS) for Total Residual Chlorine

Required Action	<b>Due Date</b>
<b>Report on Effluent Discharge:</b> Submit a report on effluent total residual chlorine with conclusions regarding compliance.	06/30/2020
When 11 or more representative results for total residual chlorine have been provided to the Department, the permittee may request that the Department make a determination of the need for a limit under section NR 106.05, Wis. Adm. Code. If the Department determines that effluent limitations are unnecessary based on the procedures in NR 106.05, the Department shall notify the permittee that the limitations will not become effective, pursuant to NR106.04(4). The monitoring requirements for total residual chlorine may be reduced and the compliance schedule shall be discontinued. A permit modification is required to implement these changes.  Note: Refer to the Surface Water section 1.2.1.1 regarding "Potential Removal of Effluent	
Limitation(s)".	
<b>Action Plan:</b> Submit an action plan for complying with all applicable effluent limitations. If construction is required, include plans and specifications with the submittal.	12/31/2020
Initiate Actions: Initiate actions identified in the plan.	06/30/2021
<b>Achieve Compliance:</b> The permittee shall complete all identified actions in the plan and achieve compliance with the final chlorine WQBELs.	01/01/2022

# 3.2 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

Required Action	
<b>Final Plans and Specifications:</b> Unless the permit has been modified, revoked and reissued, or reissued to include Adaptive Management or Water Quality Trading measures or to include a revised schedule based on factors in s. NR 217.17, Wis. Adm. Code, the permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below. (Note: Permit modification, revocation and reissuance, and reissuance are subject to s. 283.53(2), Stats.)	06/01/2020
Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	
Treatment Plant Upgrade to Meet WQBELs: The permittee shall initiate construction of the upgrades. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41. Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	
Construction Upgrade Progress Report #1: The permittee shall submit a progress report on	07/01/2021

construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.		
Construction Upgrade Progress Report #2: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	01/01/2022	
<b>Complete Construction:</b> The permittee shall complete construction of wastewater treatment system upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface		
Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.		

# 3.3 Land Application Management Plan

Required Action	Due Date
<b>Land Application Management Plan:</b> Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214 90 days prior to the commencement of land application activities.	

# 4 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

#### 4.1 Reporting and Monitoring Requirements

#### 4.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

# 4.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

# 4.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

#### 4.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD<sub>5</sub> and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

#### 4.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

#### 4.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

#### 4.1.7 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

#### 4.2 System Operating Requirements

#### 4.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources immediately of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.

#### 4.2.2 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

## 4.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the

bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

#### 4.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

#### 4.2.5 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

#### 4.2.6 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-incharge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

# 4.2.7 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

## 4.2.8 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a

description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

#### 4.2.9 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

#### 4.3 Surface Water Requirements

#### 4.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

#### 4.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

**Six-Month Average Mass Discharge (lbs/day):** Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

**Annual Average Mass Discharge (lbs/day):** Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

**Total Monthly Discharge:** = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

**Total Annual Discharge:** = sum of total monthly discharges for the calendar year.

**12-Month Rolling Sum of Total Monthly Discharge:** = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

#### 4.3.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

**Cold Shock Standard** — Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. 'Cold Shock' means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

**Rate of Temperature Change Standard** – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

#### 4.3.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

#### 4.3.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

## 4.3.6 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the "State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2<sup>nd</sup> Edition" (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the Ceriodaphnia dubia and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

# 4.3.7 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

• A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;

- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including some or all of the following actions:
  - (a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
  - (b) Identify the compound(s) causing toxicity
  - (c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
  - (d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)
- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;
- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

#### 4.4 Land Application Requirements

#### 4.4.1 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

# 4.4.2 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Report Form 3400-49. The report form shall be submitted electronically no later than the date indicated on the form. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg.

All sludge results shall be reported on a dry weight basis.

## 4.4.3 Annual Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted electronically on the Annual Land Application Report Form 3400-55 by January 31, each year whether or not waste is land applied. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

#### 4.4.4 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

#### 4.4.5 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

#### 4.4.6 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

# 4.4.7 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

Wet Weight Solids: <u>lbs of solids X %solids X %chloride</u> = lbs chloride/acre acres land applied X 100 X 100

Liquid: mg/L chloride X (millions of gallons) X 8.34 = lbs chloride/acre acres land applied

# 4.4.8 Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits (consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

Wet Weight Solids and Sludges: <u>lbs of solids X % solids X % TKN</u> = lbs TKN/acre acres land applied X 100 X 100

Liquid: mg/L TKN X (millions of gallons) X 8.34 = lbs TKN/acre acres land applied

#### 4.4.9 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

#### 4.4.10 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

#### 4.4.11 Soil Incorporation Requirements

- Liquid Sludge Requirements: The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- Cake Sludge Requirements: After land application, cake sludge shall be incorporated into the soil. The
  timing of such incorporation and other related requirements and procedures shall be specified in the
  management plan or in specific site applications, subject to Department approval. The permittee shall
  comply with the requirements in the Department approved management plan, specific site-approval
  requirements and the terms and conditions of this permit.
- Liquid Wastewater Requirements: The Department may require that liquid wastewater be incorporated or
  injected into the soil on specific land application sites when necessary to prevent surface runoff or
  objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater,
  when such injection or incorporation is necessary, shall be specified in the management plan or in specific
  site applications, subject to Department approval. The permittee shall comply with the requirements in
  the Department approved management plan, specific site-approval requirements and the terms and
  conditions of this permit.
- By-Product Solids Requirements: The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

## 4.4.12 Field Stockpiles

The permittee is encouraged to landspread the by-product solids or sludges as they are transported to the fields; but if it becomes necessary to stockpile solids in the fields, the stockpiles shall be spread within 72 hours or as specified in the approved management plan.

#### 4.4.13 By-Product Storage Sites

All sites used for storage of by-product solids shall be located such that surface water or groundwater pollution does not occur. Written Department approval is required prior to storage of more than 150 tons of by-product solids on a site at any one time.

#### 4.4.14 Annual Inspections-Stacking Pads and Leachate Containment

Stacking pads for more than 1200 tons of silage and all leachate containment facilities shall be inspected annually for cracks and shall be repaired as necessary to prevent leakage from the containment system. The inspection reports shall be available for inspection by Department personnel for a period of three years, and shall include at a minimum the following information:

- date and name of person(s) performing the inspection
- · description of what the inspection consisted of
- details of what was discovered during the inspection
- recommendations for repair or maintenance
- details or repair completed

#### 4.4.15 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

# **5 Summary of Reports Due**

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Water Quality Based Effluent Limits (WQBELS) for Total Residual Chlorine -Report on Effluent Discharge	June 30, 2020	8
Water Quality Based Effluent Limits (WQBELS) for Total Residual Chlorine -Action Plan	December 31, 2020	8
Water Quality Based Effluent Limits (WQBELS) for Total Residual Chlorine -Initiate Actions	June 30, 2021	8
Water Quality Based Effluent Limits (WQBELS) for Total Residual Chlorine -Achieve Compliance	January 1, 2022	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Plans and Specifications	June 1, 2020	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Treatment Plant Upgrade to Meet WQBELs	September 1, 2020	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #1	July 1, 2021	9
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #2	January 1, 2022	9
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Complete Construction	January 1, 2023	9
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Achieve Compliance	April 1, 2023	9
Land Application Management Plan -Land Application Management Plan	See Permit	9
General Sludge Management Form 3400-48	prior to any significant sludge management changes	16
Characteristic Report Form 3400-49	no later than the date indicated on the form	16
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	16
Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit	17
Wastewater Discharge Monitoring Report	no later than the date	10

indicated on the form	

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to: